

IAEA/ESNM Webinar Series on basic NM

Basic Principles of Radionuclide Therapy and common Clinical Applications

Target audience

Nuclear medicine physicians, trainees in nuclear medicine and affiliated scientists with an interest in radionuclide therapy.

Description

Radionuclide therapy is a growing field of interest within nuclear medicine. Originally, radioiodine was the cornerstone in the treatment of thyroid disorders, such as hyperthyroidism and thyroid cancer. Over the past decennia, many other treatment options have become available, such I131-MIBG, Lu177-DOTatate, Yttrium-90, etc., for benign as well as malignant entities. Therefore, it is essential for the practicing nuclear medicine physician to have a good understanding of the basic aspects of RNT.

This webinar provides an overview of the radiobiological aspects of RNT, the effects and side effect of treatment. Self-irradiation, crossfire and Bystander effects are clarified in relation to alpha, beta and gamma radiation. Moreover, several stochastic and deterministic effects of RNT will be presented. In addition, therapy evaluation and outcome, such as overall and disease free survival, are discussed and related to several clinical entities. Additive and synergistic therapeutic options are addressed in relation to combined RNT. Finally, general contraindications, common precautions and regulations related to RNT are reviewed.